**A DEFENSE OF LUCRETIANISM**

**Abstract**

According to the *presentist*, it is always the case that the only existing objects are those that exist at the present time, and the only properties and relations that are instantiated are those that are instantiated at the present time. The *truth-supervenes-on-being thesis* (TSB) is that there can be no difference in what is true without a corresponding difference in what exists and in what properties and relations are instantiated. The *truth-supervenes-on-being objection* says that presentism cannot accommodate TSB. *Lucretianism* is the thesis that the world instantiates irreducibly past-tensed properties. Though not popular, it is not entirely uncommon for presentists to endorse Lucretianism as a means to respond to the truth-supervenes-on-being objection. Defenses of Lucretianism itself are still less common. Appropriately up-to-date defenses are lacking altogether. I take up such a defense, arguing that the attacks on Lucretianism fail, and that there is, therefore, no compelling truth-supervenes-on-being objection to presentism.

**1. TSB**

According to the *presentist*, it is always the case that the only existing objects are those that exist at the present time, and the only properties and relations that are instantiated are those that are instantiated at the present time. A *wholly non-present object* is one that, roughly, exists at some past times or future times, but does not exist at the present time. Presentism implies that there are no wholly non-present objects.

 It is often thought that truth must *depend* on the world, and that the correct account of this dependence is given in terms of supervenience. More specifically, to claim that truth depends on the world is to claim that truth supervenes on being (Keller 2004, p. 85, Lewis 1992, pp. 218-219, Merricks 2007, Ch. 4, and Sider 2001, p. 36). There are multiple ways to understand the thesis that truth supervenes on being. Although we will have reason to modify it as we proceed, let us begin by discussing a fairly straightforward version of this thesis:

There can be no difference in what is true without a corresponding difference in what exists and in what properties and relations are instantiated.

Call this the *truth-supervenes-on-being thesis* (TSB).[[1]](#endnote-1)

 That presentism cannot accommodate TSB is a familiar objection. It is discussed by Ross Cameron (2011), Thomas Crisp (2007), Simon Keller (2004), David Lewis (1992), Trenton Merricks (2007, Ch. 6), Michael Rea (2003), David Sanson and Ben Caplan (2010), and Theodore Sider (2001, p. 35-42), among others.

 Why is the truth of TSB thought to pose a problem for the presentist? Consider Bertrand Russell’s (1921, p. 104) famous hypothesis that the world might have come into existence five minutes ago, exactly as it then was. It would seem that, if presentism is true, then there is no difference between Russell’s world and ours in terms of what exists and what properties and relations are instantiated. But if Russell’s hypothesis were correct, then some propositions that are true in our world would turn out to be false. For instance, consider:

 (*D*) Lincoln delivered his Second Inaugural Address.

*D* is true. But if Russell’s hypothesis were true, then *D* would be false: had the world come into existence five minutes ago, then Lincoln would never have existed, let alone delivered his Second Inaugural Address.

 Given presentism, so the objection goes, the truth of *D* implies the falsity of TSB:if presentism is true, then the truth of *D* does not supervene on what exists and on what properties and relations are instantiated. But, so the objection continues, TSB is true, and so the truth of *D* implies the falsity of presentism. Call this the *truth-supervenes-on-being objection*.

**2. Lucretianism**

John Bigelow (1996) understands the world to be the totality of things existing at the present time. Like other individual objects existing within it, the world itself has properties. Some of these properties are straightforward. For instance, the world instantiates the property *having life on Earth*, and *having no inhabitants on Mars*. But, drawing inspiration from Lucretius and from the ancient Stoics, Bigelow also thinks that the world instantiates other properties as well, what I will call *Lucretian properties*. For an example of a Lucretian property, consider *was Lincolnian* (i.e. the world was once inhabited by Lincoln, who was President, gave various addresses, etc.). So *Lucretianism* is the view that the world instantiates (irreducibly) past-tensed properties.[[2]](#endnote-2)

 The world’s present instantiation of such properties plausibly provides a supervenience base for *all* true propositions concerning wholly past objects, and not just *D*. So if Lucretianism is true, the world of Russell’s skeptical scenario is *not* indistinguishable from ours in terms of what exists and what properties and relations are instantiated. Again, *D* is true in our world, though it is not true in Russell’s. Given the presentist’s adoption of Lucretianism, this difference in truth value supervenes on a difference in the Lucretian properties that are instantiated in our world, and the Lucretian properties that are instantiated in Russell’s. So Lucretian properties provide an adequate supervenience base for the truth of *D*.

In describing the truth-supervenes-on-being objection, Sider (2001, pp. 36-37) observes: “For the presentist…the properties and relations of objects are confined to those of *currently* existing objects. But surely the truth about the past is not fixed by such facts about the present”. But to say that truths about the past are not “fixed” in this fashion is just to say that such truths are not *necessitated* by the presentist’s ontology. So the truth-supervenes-on-being objection to presentism is a demand for something in the presentist’s ontology that necessitates truths about the past. Merricks (2007, p. 134) emphasizes this point explicitly: “Thus Lucretianism provides the resources to block the standard…TSB-based objection to presentism, the objection that, given presentism, nothing necessitates truths about the past”. To accept Lucretianism is precisely to accept properties whose instantiation necessitates truths about the past. As Crisp (2007, p. 93) notes, the Lucretian will “…think it impossible that a world should have the same [Lucretian] properties as ours but a different past”.

As acceptance of Lucretian properties allows the presentist to make the *prima facie* plausible claim that truths about the past are necessitated by elements of her ontology, I think the presentist should endorse Lucretianism. Though Bigelow (1996) and Crisp (2007) have provided valuable arguments in favor of Lucretianism, there have been additional published objections in the interim, and so a further defense of Lucretianism is required. I will attempt such a defense.

**3. Restricting the Supervenience Base**

If one wants to use the truth-supervenes-on-being thesis to rule out questionable ontologies, then one must build restrictions into the supervenience base (cf. Sider 2001, pp. 40-41). Consider the following proposition:

 (\*) There is at least one true proposition.

Suppose (\*) exists, and that it instantiates the property *being true.* Then the truth of (\*) plausibly supervenes on (\*)’s instantiation of *being true* (Merricks 2007, pp. 30-32).

 Suppose the Lucretian thinks that *D* exists, and that it also instantiates the property *being true*. If so, then she can say that the truth of *D* supervenes on *D*’s instantiation of *being true*. But this is surely too easy. For any true proposition *p*, one can insist that *p* instantiates *being true*, and that the truth of *p* supervenes on *p*’s instantiation of *being true*. Perhaps this is satisfactory for some propositions (e.g. (\*)), but it is not satisfactory for all. So the Lucretian should not claim that the truth of *D* supervenes on *D*’s instantiation of *being true* and nothing else.

 Why does the property *being true* figure appropriately into a supervenience base for the truth of (\*), while it does not do so for the truth of *D*? The answer is that while perhaps the truth of (\*) supervenes on whether or not (\*) itself instantiates a certain property (e.g. *being true*), the truth of *D* seems to be a different matter. The truth of *D* does not supervene on whether or not this proposition itself is a certain way. Rather, its truth seems to supervene on whether or not the (non-propositional) world is a certain way; that is, *D*’s truth seems to supervene on whether or not there are certain (non-propositional) objects instantiating properties. But to claim that the supervenience base for the truth of (\*) is distinct from the supervenience base for the truth of *D* is just to insist that the latter supervenience base should be restricted in some sense.

 As it stands, TSB cannot rule out questionable ontologies, because it specifies no restrictions on the supervenience base. Can the latter be restricted to rule out Lucretian properties, and thus undermine the presentist reply considered in section 2? While it would be question-begging merely to assert that Lucretian properties cannot figure into the appropriately formulated supervenience base, published responses to Lucretianism do not beg the question in this way. Such responses provide substantive reasons for rejecting Lucretian properties, and my task is to show that the reasons for rejecting such properties are not compelling.

**4. On the Categorical-Hypothetical Distinction**

Let us say that a property is suspicious if it is *hypothetical*; a questionable ontology is one that posits hypothetical properties, as opposed to *categorical* properties (Sider 2001, pp. 40-41). As a first pass, we can say that categorical properties involve what objects are actually like, while hypothetical properties “point beyond their instances”, in the sense that such properties do not supervene on any underlying non-dispositional or non-modal (i.e. actual) properties, respectively (Sider 2001, pp. 40-41).

To illustrate, consider a dispositional property such as fragility. If a fragile glass were to be struck with sufficient force, then it would shatter. If it is not to be a brute dispositional property, then – so the argument goes – the glass’s fragility should supervene on some categorical (i.e. non-dispositional) property (or properties), which, in this case, is its underlying molecular structure.

Sider (2001, p. 41) argues that the problem with Lucretian properties is that they are hypothetical; as an appropriate ontology should only countenance categorical properties, and not hypothetical ones, Lucretianism should be rejected. But, as Crisp (2007, pp. 94-97) and Sider (2001, p. 41) both acknowledge, the distinction between categorical properties and hypothetical properties is a difficult one to draw.

 In fact, my brief gloss (given above) notwithstanding, there is little agreement concerning both what the categorical-hypothetical distinction amounts to, and what importance it has for the status of Lucretian properties. For instance, Ross Cameron (2011) and Jonathan Schaffer (2007) both take the categorical-hypothetical distinction to be best understood in terms of the distinction between *intrinsic* and non-intrinsic properties. Cameron then objects to Lucretian properties on the grounds that such properties are not intrinsic.

 Furthermore, both Crisp (2007), and David Sanson and Ben Caplan (2010) discuss the relevance of the categorical-hypothetical distinction for Lucretian properties, though neither takes the question of whether or not such properties are categorical to be of primary importance. Crisp argues that the most pressing difficulty for Lucretian properties is whether or not such properties are *natural*, while Sanson and Caplan object to Lucretian properties on the grounds that they are not *explanatory*.

 I do not know if Lucretian properties are categorical properties, and this is because I am not sure how to distinguish the latter from those that are merely hypothetical. But we can defuse Sider’s objection to Lucretian properties by approaching it indirectly. We have a tolerable understanding of intrinsic properties, natural properties, and explanatory properties. I will argue – in keeping with the discussion in section 3 – that objections to Lucretian properties should be viewed as various attempts to restrict the base upon which truth supervenes. I think it is fair to say that insofar as Lucretian properties are plausibly regarded as being *either* intrinsic, natural, *or* explanatory, then they are thereby permitted in the supervenience base. I will, however, argue for the stronger claim that Lucretian properties are plausibly regarded as being intrinsic, natural, *and* explanatory. As a result, the question of whether or not Lucretian properties are categorical becomes comparatively unimportant, and so I will not discuss it further.

Some will remain skeptical. They will insist that, in spite of my arguments to the contrary, Lucretian properties are not intrinsic, or are not natural, or are not explanatory. Suppose we grant these objections. I will argue that doing so does not threaten the Lucretian. For, as I will show, those who so object must give an account of how the truth of negative existential propositions, such as *that there are no unicorns* is necessitated by what exists and what properties and relations are instantiated. But, however we restrict the supervenience base (i.e. whether to intrinsic, natural, or explanatory properties and relations), the result is the same: the properties (or relations) required to account for the truth of negative existential propositions are *no more* intrinsic, or natural, or explanatory than Lucretian properties.

**5. TSBI**

Cameron (2011) and Schaffer (2007) think we should take the difference between categorical properties and hypothetical properties to be that the former are *intrinsic* while the latter are not. Why think so? It seems clear that an intrinsic property is one that concerns both how an object is in and of itself, and how it is apart from everything else; on the other hand, a non-intrinsic property is one that an object has in virtue of the way its environment is. So we might say that an intrinsic property points to the way an object is, whereas a non-intrinsic property points beyond the way an object is to the way other objects are.

 Cameron (2011) objects to Lucretian properties on the grounds that they are not intrinsic. Restricting the supervenience base to intrinsic properties suggests the following reformulation of the truth-supervenes-on-being thesis:

 (TSB­I) There can be no difference in what is true without a corresponding difference in what exists and in what *intrinsic* properties and relations are instantiated.

Suppose TSBI is plausible.The objection to Lucretianism becomes: Lucretian properties are not intrinsic properties; so the world’s instantiation of these properties does not provide an adequate supervenience base for the truth of *D* (and other propositions like it).

 Cameron notes that an object’s instantiation of a non-intrinsic property “…tells us nothing about how the object is *in and of itself*, it only tells us about how the object is in virtue of how its surroundings are” (2011, p. 59). Lucretian properties, in particular, do not make a contribution to the intrinsic nature of their bearer at the time at which they are instantiated (2011, p. 60).[[3]](#endnote-3) More precisely, Cameron objects to Lucretian properties because they fail to meet the following requirement:

*Intrinsic Determination*: For all objects *x* and properties *F* and times *t*, if *x* instantiates *F* at *t*, then *x* has the intrinsic nature at *t* that it has partly *in virtue of* instantiating *F* at *t* (2011, p. 61).

Let us say that contingent objects *a* and *b* are *wholly distinct* if they have no part in common (Kim 1982). Next, let us understand Cameron’s notion of “surroundings” as follows: let an object *a*’s *surroundings* be just those objects that are wholly distinct from *a*. In agreement with Cameron, we can then say that an intrinsic property is one whose instantiation by an object tells us how that object is and not how any wholly distinct object is (cf. Lewis 1983a, p. 197).According to *Intrinsic Determination*, if the world instantiates Lucretian properties, then the world has the intrinsic nature that it does partly in virtue of instantiating such properties. So how does *Intrinsic Determination* classify Lucretian properties? First, I will argue that Lucretian properties qualify as intrinsic according to Cameron’s criteria. Second, I will argue that even if we suppose that Lucretian properties are *not* intrinsic, this fact need not worry the Lucretian.

According to Cameron, Lucretian properties fail to be intrinsic if they tell us how the world is in virtue of how the latter’s surroundings are. But the Lucretian holds that wholly non-present objects do not exist (section 1); as the world is the totality of things existing at the present time (section 2), it follows that the world has no surroundings. And if the world has no surroundings, then Lucretian properties do *not* tell us how the world is in virtue of how the latter’s surroundings are. Second, although Lucretian properties concern how things were, this is how the world *is* in and of itself: the world instantiates *was Lincolnian*.[[4]](#endnote-4) So, according to Cameron’s *Intrinsic Determination*, Lucretian properties are intrinsic. Thus my first argument in defense of Lucretian properties.

It might now be objected that if Lucretian properties are classified as intrinsic, then something has gone wrong with the classification.[[5]](#endnote-5) So suppose we grant that Lucretian properties are not intrinsic. As we have seen, Lucretianism is an answer to the demand for something in the presentist’s ontology that necessitates truths about the past (section 2). So to object to Lucretianism on the grounds that TSBI is true is to insist that, although Lucretian properties necessitate truths about the past, such properties are not intrinsic.

But there is an analogous objection to one who argues against Lucretianism in this fashion. Consider a negative existential proposition, such as *that there are no unicorns*. For one who objects to Lucretianism on the grounds that TSBI is true, it would be a double standard to require merely that the truth of *that there are no unicorns* supervenes on what exists and on what properties and relations are instantiated, while not also requiring that any of these existents or instantiated properties and relations thereby *necessitate* the truth of the relevant negative existential proposition.[[6]](#endnote-6) That is, endorsing as she does the TSBI-based objection to Lucretianism, our objector has thereby incurred the burden of showing that her ontology necessitates the truth of *that there are no unicorns*. For consider: it is possible that, in addition to everything that actually exists, and all of the intrinsic properties and relations that are actually instantiated, there also exists a unicorn. It then follows that everything that actually exists, and all of the intrinsic properties and relations that are actually instantiated *do not* necessitate the truth of the negative existential proposition *that there are no unicorns* (cf. Merricks 2007, p. 73). Thus one of the standard benefits of understanding truth’s dependence on the world in terms of supervenience – that is, that doing so relieves the burden of accepting the existence of some entity (or entities) that necessitates the truth of negative existential propositions – is not available to one who objects to Lucretianism from the truth of TSBI.[[7]](#endnote-7)

Our objector’s burden can be partially discharged by accepting the existence of a property whose instantiation excludes the existence of unicorns. Call such a property an *exclusion* property. Acceptance of exclusion properties is an answer to the demand for something that necessitates negative existential truths. In parallel with the demands it makes of the Lucretian, however, TSBI is also a demand for the proponent of exclusion properties to show that such properties are intrinsic. But we have just seen that exclusion properties are not intrinsic.

Given our current assumption that Lucretian properties are not intrinsic, we should hold that, with respect to intrinsicality, exclusion properties are on par with Lucretian properties. But if this is so, then both the Lucretian and the proponent of exclusion properties must reject TSBI. Thus my second argument in defense of Lucretian properties.

Either Lucretian properties are intrinsic, or they are not. If such properties are intrinsic, then TSBI is satisfied. If such properties are not intrinsic, then, as the exclusion properties required to account for the truth of negative existential propositions are no moreintrinsic than Lucretian properties, TSBI is an inadequate restriction of the supervenience base. In either case, TSBI fails to rule out Lucretian properties, and so we must look for a better restriction.

**6. TSBN**

Another popular attempt to rule out Lucretian properties proceeds by restricting thesupervenience base to *natural* properties. Such properties “carve nature at the joints”, and ground objective similarities between objects, such that sharing of such properties makes for similarity of intrinsic qualitative character (cf. Crisp 2007, pp. 97-98, Lewis 1986, pp 60-62).[[8]](#endnote-8) Thus we have yet another formulation of the truth-supervenes-on-being thesis:

(TSB­N) There can be no difference in what is true without a corresponding difference in what exists and in what *natural* properties and relations are instantiated.[[9]](#endnote-9)

This brings us to another version of the truth-supervenes-on-being objection: Lucretian properties are not natural properties; so the world’s instantiation of such properties does not provide an adequate supervenience base for the truth of *D*.

 Following David Lewis (1983b, p. 356; 1986, pp. 60-61), let us say that *duplicate* objects share all of the same perfectly natural properties; a property is *perfectly* *natural* if it is (i) intrinsic, and (ii) not disjunctive. I will argue for the perfect naturalness of Lucretian properties (in reverse order) as follows. First, I will argue that Lucretian properties are not disjunctive. Second, I will argue that such properties are intrinsic because they never differ between duplicate worlds (this second argument will strengthen the case made in the previous section that Lucretian properties are intrinsic). The result of these two arguments is that Lucretian properties are perfectly natural. Third, for those who remain unconvinced, I will argue that even if we suppose that Lucretian properties are not perfectly natural, this fact is dialectically ineffective against the Lucretian.

I begin with (ii). Let *w* and *w\** be possible worlds. Let the *world-in-w* be the Lucretian world (i.e the totality of things existing at the present time) in *w*, let the *world-in-w\** be the Lucretian world in *w\**, and let the world-in-*w­* be qualitatively identical with the world-in-*w\**. For simplicity, suppose that the qualititatively identical histories of these worlds consist solely of the occurrence of two past events, *A* and *B*. As Lucretian properties are plausibly conjunctive, it follows that the world-in-*w­* and the world-in-*w\** both instantiate the Lucretian property *was A & B*. But now a question arises: How can the Lucretian rule out that, for instance, the world-in-*w­* instantiates the Lucretian property *was A & (A ∨ C) & B*, while the world-in-*w\** instantiates the distinct Lucretian property *was A & (A ∨ D) & B*? Unless the Lucretian can plausibly argue that Lucretian properties are not disjunctive, then the previous example seems to be possible. But if Lucretian properties are disjunctive, then they are not natural (let alone perfectly natural).

My first response to the objection that Lucretian properties are disjunctive is to note that while the actual history of a world is plausibly regarded as a conjunction of events (e.g. *A* and *B*), no actual history of a world is plausibly regarded as a disjunction of such events (e.g. *A* or *B*). So while Lucretian properties can plausibly be regarded as conjunctive properties, there is no reason to hold that such properties are disjunctive.

On the other hand, one might worry that although actual histories and Lucretian properties themselves are both conjunctive, nevertheless Lucretian properties may be made up of conjuncts that are themselves disjunctive. I have two responses to this objection.

 First, the Lucretian should emphasize that, in the examples mentioned previously, the Lucretian property *was* *A & B* is logically equivalent to both *was* *A & (A ∨ C) & B* and *was A & (A ∨ D) & B*. Absent any reason to prefer a more cumbersome property over a more elegant and logically equivalent alternative, the Lucretian should insist that, correctly understood, Lucretian properties, though conjunctive, have no disjunctive conjuncts.

Second, the Lucretian should insist that Lucretian properties satisfy intuitive criteria of minimal informativeness. Given a past history of *A* and *B*, the Lucretian property *was A & B* is clearly more minimally informative than either of the disjunctive properties *was A & (A ∨ C) & B* or *was A & (A ∨ D) & B*, because the respective disjunctions *A ∨ C* and *A ∨ D* provide no new information beyond what *A* itself already provides. I think this result holds generally. Let events *X1*, *X2*, …, *Xn* be a particular world’s history. The conjunctive Lucretian property *was X1 & X2 & … & Xn* is always more minimally informative than a (notationally) distinct property that differs from the former property only in that it includes one or more disjunctive conjuncts, such as *was X1 & X2 & (X1 ∨ X2) … & Xn*. Furthermore, from the fact that Lucretian properties are minimally informative, it follows that qualitatively identical worlds (which includes their qualitatively identical histories) instantiate the same Lucretian properties. So the Lucretian should insist that the scenario described above (i.e. wherein Lucretian worlds with qualitatively identical histories nevertheless instantiate distinct Lucretian properties) is impossible. I conclude that Lucretian properties are not disjunctive.

As for (i) we have already seen reasons for taking Lucretian properties to be intrinsic (section 5). And here is another such reason[[10]](#endnote-10): Lewis (1986, p. 61) holds that an intrinsic property is one that never differs between duplicates; but we have just seen that, from the minimally informative nature of Lucretian properties, it follows that if two worlds are duplicates (and so share qualitatively identical histories), then they instantiate the same Lucretian properties. Thus Lucretian properties are intrinsic. But such properties are also not disjunctive; therefore they are also perfectly natural.

 I have shown that Lucretian properties satisfy all of Lewis’s criteria for perfect naturalness. But for those who remain unconvinced, suppose we grant that, for whatever reason, Lucretian properties are not natural. I will now argue that even if we grant this point, nothing troubling follows for the Lucretian.

Consider again the proposition *that there are no unicorns*. We have seen that Lucretianism is a response to the demand – set by the truth-supervenes-on-being objection – for something in the presentist’s ontology that necessitates truths about the past (section 2). To object to Lucretianism on the grounds that TSBN is true is to insist that although Lucretian properties necessitate truths about the past, such properties are not natural. But one who objects to Lucretianism in this way thereby accepts a corresponding demand for natural properties that necessitate negative existential truths. So to object to Lucretianism on the grounds that TSBN is true is just to accept the existence of exclusion properties, as these properties necessitate the truth of negative existential propositions such as *that there are no unicorns* (section 5). But, given our current assumption that Lucretian properties are not natural, we should say that exclusion properties are no more natural than Lucretian properties: it seems incredible to suppose that exclusion properties carve nature at the joints while also supposing that Lucretian properties do not. But then both the Lucretian and the proponent of exclusion properties must reject TSBN. Thus my final argument of this section.

Either Lucretian properties are natural, or they are not. If such properties are natural, then TSBN is satisfied. If such properties are not natural, then, as the exclusion properties required to account for the truth of negative existential propositions are no morenatural than Lucretian properties, TSBN is an inadequate restriction of the supervenience base. Regardless, TSBN fails to rule out Lucretian properties, and so we must continue our search for a better restriction.

**7. TSBE**

David Sanson and Ben Caplan (2010) argue that the supervenience of truth on being should have an *explanatory* function (cf. Keller 2004, pp. 85-87):

…The interest in the supervenience of truth upon the world, or – if we

are naïve – in the correspondence of a true proposition with the facts, is, at least

in part, an interest in a certain kind of explanation. We don’t want a mere

correlation between what is true and what the world is like; rather, we want the

truth of a proposition to be *explained* by how things are in the world (2010, p. 26).

Sanson and Caplan’s remarks suggest another formulation of the truth-supervenes-on-being thesis:

(TSBE) There can be no difference in what is true without a corresponding difference in what exists and in what *explanatory* properties and relations are instantiated.

Our latest version of the truth-supervenes-on-being objection is: Lucretian properties are not explanatory; so the world’s instantiation of these properties does not provide an adequate supervenience base for the truth of *D*.

 To illustrate their dissatisfaction with Lucretian properties, Sanson and Caplan (2010, pp. 27-28) give an example designed to highlight a difference between proper and improper explanations.Consider the occurrence of some event *b* that is due to the presence of some event *a*. The only reason that the singleton {*a*} has any bearing on the occurrence of *b* is that if {*a*} exists, then *a* exists, and *a*’s existence is what properly explains the occurrence of *b*; {*a*}’s existence is, at best, explanatorily derivative.

 Sanson and Caplan’s example bears on Lucretianism as follows. When Lincoln existed, we may suppose that the world instantiated the property *is Lincolnian*. At that time, the truth of

 (*D*\*) Lincoln delivers his Second Inaugural Address

supervened on the world’s instantiation of *is Lincolnian*. Sanson and Caplan are willing to grant that, at that time, the world’s instantiation of *is Lincolnian* explains the truth of *D*\*. But they think that the truth of *D* is not properly explained by the world’s instantiation of *was Lincolnian*; rather, they insist that the truth of *D* is best explained by the world’s past instantiation of *is Lincolnian* (2010, pp. 26-28). That the world once instantiated *is Lincolnian* appropriately explains why the world now instantiates *was Lincolnian*, but the converse does not hold. Just as {*a*} is explanatorily derivative when compared to *a*, so the world’s (present) instantiation of *was Lincolnian* is explanatorily derivative when compared to its past instantiation of *is Lincolnian* (2010, pp. 26-28). Truths about the past are appropriately explained by how things were, and not by how things are. That is, truths about the past supervene on, and are appropriately explained by, past instantiations of properties and relations, and not by present instantiations of properties and relations.

 So Sanson and Caplan’s first objection to Lucretian properties is that they are explanatorily derivative. Their second objection is that neither the Lucretian, nor any other presentist, can explain the truth of *D* (and other propositions like it) while holding that the only properties and relations that are instantiated are those that are instantiated at the present time (2010, pp. 26 and 38).

 In response, I will argue that if Lucretianism is true, then Lucretian properties are necessary to explain the truth of *D*. Furthermore, the Lucretian *can* explain the truth of *D* (and other propositions like it) while maintaining standard presentist commitments. To this end, I will offer a two-part response in which I sketch a Lucretian account of explanation. Finally, in parallel with the previous two sections, I will argue that even if we suppose that Lucretian properties are not explanatory, this fact does not threaten Lucretianism.

 It is worth noting that I will neither be arguing that Sanson and Caplan’s account of explanation fails, nor that my proposed account of explanation is superior to theirs. Rather, my goal will be the somewhat more modest one of showing that, on my account, Lucretian properties play an explanatorily necessary role, and so Sanson and Caplan have not shown that such properties are explanatorily derivative. But achieving even this goal (while affirming the presentist thesis that the only properties and relations that are instantiated are those that are instantiated at the present time) is sufficient to show what is, for our purposes, more important, namely, that TSBE does not rule out Lucretian properties.

A specifically *Lucretian* explanation implies that past truths supervene on the world’s instantiation of Lucretian properties. That is, on the assumption that Lucretianism is true, the Lucretian will regard the supervenience of past truths on the world’s instantiation of Lucretian properties as necessary (though not sufficient) for the explanation of such truths.[[11]](#endnote-11) Thus the first part of my account of explanation.

 Second, as the supervenience just described is not sufficient for explanation, something more is required. I think the Lucretian should describe this “something more” as follows. Purported causal claims about wholly non-present events should be described as claims involving true propositions linked by the “because” sentential connective. Consider:

 (*P*) Lincoln prepared his Second Inaugural Address.

Let *p* be the event of Lincoln’s preparing his Second Inaugural Address, and let *d* be the event of Lincoln’s delivering the Address in question; intuitively, propositions *P* and *D* are about *p* and *d* respectively. The non-presentist would say that *p* caused *d*. The Lucretian should say that this causal claim is more accurately rendered as: *D* is true because *P* is true.

 *P* counts as an explanation of *D*, because the truth of *P* provides information about the causal history of *d*. But *p* and *d* do not (presently) stand in any causal relation, and just as the truth of *D* does not imply that *d* exists, so the explanatory information provided by *P* does not imply that *p* exists: according to the Lucretian, wholly non-present events do not exist.

 We can describe the explanatory links between *P* and *D* as follows. Let *L1*, *L2*, …, *Ln* be propositions. Various true propositions figure into the causal history of *d*. Among them are: *L1*, *L2*, …, *Ln*. The truth of *D* is explained by the truth of *Ln*, which is explained by the truth of *Ln-1*, …,which is explained by the truth of *L1*, which is explained by the truth of *P*. (Of course *P* has its own explanatory antecedents as well; the truth of propositions about other events occurring prior to *p* serves to partially explain the truth of *P*.) Thus the second part of my account of explanation.

Putting the two parts of my account together, the Lucretian should thus say that *D*’s truth is partially explained by its standing in explanatory relations to other true propositions (i.e. *P*, *L1*, *L2*, …, *Ln*), and that all of these truths (i.e. *P*, *L1*, *L2*, …, *Ln*, *D*) supervene on (and so are partially explained by) the world’s instantiation of Lucretian properties.

As noted, I agree with Sanson and Caplan (2010, p. 30) that mere supervenience is not sufficient for explanation. On the other hand, I have argued that, on the assumption that Lucretiainism is true, the supervenience of past truths on the world’s instantiation of Lucretian properties is necessary for explanation, and so such properties play a role in my account of explanation that they do not play in their discussion. It follows that, contrary to what Sanson and Caplan have claimed, Lucretian properties are *not* explanatorily derivative. Furthermore, the Lucretian can explain the truth of *D* while maintaining standard presentist commitments.

I think that Lucretian properties are explanatory, and thus that they meet the standard set by TSBE. Others may disagree, and may therefore prefer Sanson and Caplan’s account of explanation over mine. So let us suppose that, one way or another, Sanson and Caplan’s account is correct, and Lucretian properties are not explanatory. I will now argue that this supposition need not worry the Lucretian.

Sanson and Caplan write, “…At least in some paradigm cases, we want the truth of a proposition to be explained by how things are in a fairly restricted part of the world” (2010, p. 26). In the paradigm cases in question, a truth about some particular *x* should be explained by how things are with *x*. So the truth of *D* should be explained by how things were with Lincoln on 4th March 1865. The Lucretian evidently fails to meet this requirement: as Lincoln does not exist, the Lucretian improperly takes the truth of *D* to supervene on (and so to be partially explained by) the world’s instantiation of Lucretian properties.

 Sanson and Caplan do not say what they mean by “paradigm cases”, though they are clear that the truth of propositions about wholly non-present objects (e.g. *D*) should be included among them. But perhaps the truth of other propositions should be included as well. Consider once more the proposition *that there are no unicorns*. Given that there are no unicorns, there is no *x* (and so no way that things are with *x*) that explains the truth of this proposition. But, to continue the by-now-familiar refrain, the truth-supervenes-on-being objection to presentism demands that something in the presentist’s ontology necessitates truths about the past (section 2). And, on pain of invoking a double standard,[[12]](#endnote-12) to object to Lucretianism on the grounds that TSBE is true is to incur a corresponding debt to accept as explanatory those exclusion properties that necessitate the truth of negative existential propositions (section 5). But if we follow Sanson and Caplan and demand that the truth of the proposition *that there are no unicorns* should “be explained by how things are in a fairly restricted part of the world”, then such exclusion properties are no more explanatory than Lucretian properties. That there are no unicorns is how the world is as a whole; but then it seems that the world itself instantiates exclusion properties. So if we grant that Lucretian properties are not explanatory (in Sanson and Caplan’s sense), then we should say that exclusion properties are not explanatory either. So both the Lucretian and the proponent of exclusion properties must reject TSBE. Thus my final argument in defense of Lucretian properties.

Either Lucretian properties are explanatory, or they are not. If such properties are explanatory, then TSBE is satisfied. If such properties are not explanatory, then, as the exclusion properties required to account for the truth of negative existential propositions are no moreexplanatory than Lucretian properties, TSBE is an inadequate restriction of the supervenience base. Either way, TSBE fails to rule out Lucretian properties.

**8. Conclusion**

It is difficult to distinguish categorical properties from hypothetical properties. Unsurprisingly, it is also difficult to say whether or not the problem with Lucretian properties generally is that they are not categorical. There is, however, more agreement concerning the nature of intrinsic properties, natural properties, and explanatory properties, and Lucretian properties have been variously accused of not being intrinsic, of not being natural, or of not being explanatory. I have given reasons for thinking Lucretian properties are intrinsic, natural, and explanatory. That is, understanding these objections to Lucretian properties as various attempts to restrict the appropriate base upon which truth supervenes, I have concluded that the Lucretian can account for TSBI, TSBN, and TSBE.

Nevertheless, I have also responded to those who both endorse one or another of TSBI, TSBN, or TSBE, and base their objection to Lucretianism on the particular thesis in question. I have argued that such objectors must account for the truth of negative existential propositions by accepting properties that are no more intrinsic, natural, or explanatory than are Lucretian properties. The upshot is that, so far, the attacks on Lucretianism are not compelling, and the truth-supervenes-on-being objection to presentism fails.

*University of Richmond*

1. **Notes**

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 Merricks (2007), p. 68, Rea (2003), and Sider (2001), p. 36, understand the truth-supervenes-on-being thesis similarly to TSB. Among those who endorse the truth-supervenes-on-being thesis generally are Bigelow (1988) and (1996), Crisp (2007), Lewis (1992) and (2001), and Sider (2001), pp. 36ff. [↑](#endnote-ref-1)
2. Crisp (2007) is another presentist who endorses Lucretianism. [↑](#endnote-ref-2)
3. Compare to Dainton (2010), pp. 92-93, who echoes Cameron’s complaint. [↑](#endnote-ref-3)
4. Admittedly this sounds very strange. The Lucretian does not *just* say that various propositions about Lincoln are true; rather, she says that the world is presently instantiating a certain property (i.e. *was Lincolnian*) that necessitates such propositions. [↑](#endnote-ref-4)
5. For those who think so: read the next section where, in the course of arguing that Lucretian properties are natural, I offer an additional argument that Lucretian properties are intrinsic. [↑](#endnote-ref-5)
6. Thus Cameron (2011), pp. 55-56n2, is mistaken when he claims that what I am calling TSBI “…doesn’t demand an entity that couldn’t exist without negative existentials, such as ‘unicorns don’t exist’, being true….there is no need, I think, to posit the existence of a unicorn excluder”. Cameron has failed to recognize that the truth-supervenes-on-being objection to presentism is a demand for something that necessitates truths about the past. Given this understanding (which, as already noted, is shared by at least Crisp, Merricks, and Sider), it is perfectly legitimate for the Lucretian presentist to turn the tables and demand of one who objects to Lucretianism from the truth of TSBI that she acknowledge the existence of some entity (or entities) that necessitates the truth of negative existential propositions. [↑](#endnote-ref-6)
7. To forestall a potential misunderstanding: nothing I say here (or elsewhere in this paper) implies that mere acceptance of TSBI (or any other variant) commits one to the existence of some entity or other that necessitates the truth of negative existential propositions. So I agree with Bigelow (1988), pp. 130-133, Lewis (1992), pp. 218-219, and Sider (2001), p. 36, when they note that one of the primary attractions of accepting TSB (in any of its forms) is precisely that it allows one to avoid such commitments. But one who *objects to Lucretianism from the truth of TSBI* (or any other variant) has gone beyond mere acceptance; it is this to which I am objecting. [↑](#endnote-ref-7)
8. Crisp (2007), p. 91, and pp. 97-98, somewhat misleadingly calls those properties that “carve nature at the joints” *fundamental* properties. But it is clear from the context that his understanding of fundamental properties coincides with my understanding of natural properties. [↑](#endnote-ref-8)
9. Lewis (1983b), pp. 358-359, (2001), p. 612, and Keller (2004), p. 85n7, defend versions of TSBN. In his discussion of whether or not presentism is consistent with the supervenenience of truth on being, Crisp (2007), p. 91, formulates the latter thesis similarly to TSBN. [↑](#endnote-ref-9)
10. Here I make good on the claim made earlier in n. 5. [↑](#endnote-ref-10)
11. See Sanson and Caplan (2010), p. 30, for further discussion on why mere supervenience is not sufficient for explanation. [↑](#endnote-ref-11)
12. Or until Sanson and Caplan provide reasons for thinking that the truth of negative existential propositions does not require the same type of explanation that presentists are required to give concerning truths about the past.

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Sider, Theodore. 2001. *Four-Dimensionalism: An Ontology of Persistence and Time* (Oxford: Oxford University Press). [↑](#endnote-ref-12)